

## December 2005 Update

### Murray Smelter Superfund Site Murray, Utah (Review Date: 9/22/03)

#### *Highlights Since the 2003 5-Year Review*

- **Intermountain Health Care Construction begins in 2004.**
  - **Costco opens its doors on-site in 2003.**
  - **Utah Transit Authority operates on-site light rail Park-and-Ride.**
  - **3 Monitoring Wells added to track natural attenuation of contaminants.**
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**Brief Site History:** The site is located in Murray, Utah in Salt Lake County. The Site includes the former operational areas of the Murray Smelter and adjacent Germania Smelter, which are referred to as the "on-facility" area, as well as surrounding residential and commercial areas where airborne emissions from the smelters impacted the environment or where contamination in shallow groundwater may be transported in the future. These surrounding areas are referred to as the "off-facility."

The Germania Smelter began operations in 1872 and operated until 1902. The Germania Smelter was purchased by the American Smelting and Refining Company (Asarco) in 1899 and was operated by the company until Murray Smelter began operations in 1902. The smelter processed lead and silver ores through its closing in 1950. In addition to lead, several by-product metals were also produced such as gold, silver, copper, antimony, bismuth, arsenic and cadmium. Based on site investigations and information on historic smelter operations, EPA identified elevated levels of metals in the surface, subsurface soils and shallow groundwater. The site was proposed for the National Priorities List in January of 1994.

**Cleanup Activities Completed:** The cleanup combined excavation and off-site disposal of soils containing high levels of arsenic. It also combined and capped on-site soils containing lower but significant levels of lead and arsenic. Residential yards with high levels of lead in the soil were excavated and restored with clean soil. Levels of arsenic in ground water and surface water will be reduced gradually by natural attenuation. Monitoring wells were installed to track the progress of attenuation. EPA oversaw the demolition of the two smoke stacks on August 6, 2000. Some of the resulting brick debris failed hazardous waste criteria and was disposed off site. The remainder was consolidated in a repository on site. The major portion of the cleanup work was completed in the summer of 2001.

**Current Status:** Remedial action activities were completed in February 2001. Institutional Controls (ICs) were established that prevent the construction of new wells on the site or using any existing wells for any purpose, as well as zoning to prevent residential and contact intensive industrial uses within the former smelter operational

areas. ICs were also established to ensure maintenance of the barriers/caps and controls on handling of excavated subsurface material.

Construction of a hospital, Intermountain Health Care, began the Summer of 2004, and completion is expected late in the Summer of 2007. Utah Transit Authority (UTA) owns and operates a Park-and-Ride facility for light rail trains in the western portion of the on-facility area. Costco, a major retail membership warehouse club, opened in 2003. Ash Grove Cement, south of the UTA facility, continues to operate as a distribution facility.

**Summary of Protectiveness:** The remedy at the site is expected to be protective of human health and the environment, and immediate threats have been addressed. The repository and barrier systems are being monitored and maintained as designed. Contaminant levels along site boundaries are below performance standards. Contaminant levels in shallow groundwater within site boundaries are consistent with expectations at the time of the ROD. In addition, residents and businesses in the area are connected to the municipal water system.

**Issues Impacting Protectiveness:** A few issues that do not immediately impact the protectiveness of the remedy were noted. The following table summarizes the status of the follow-up actions addressing these issues.

**Five-Year Review Update Table  
(Review Date: 9/22/03)**

Issues	Recommendations/ Follow-up	Follow-up Actions (Status/Due Date)	Status of Follow-up Actions 12/05	Responsible Party
1) Current approach in evaluating the repository needs to be reevaluated	Reevaluation should include review of statistical approach, frequency of groundwater sampling, and choice of indicator parameters	Completion is planned by the end of 9/04.	Action completed September 2004	Asarco, Murray City
2) Use new arsenic MCLs (0.01 mg/L) in data evaluation	Modified MCL will be the performance standard and will be used in data evaluation in future	Completion is planned by the end of 9/04.	The new MCLs were being used September 2004.	Asarco, Murray City

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3) Cadmium and lead levels in well MW-5D exceeding MCLs	ACLs for cadmium and lead should be evaluated to verify elevated levels are only located in the immediate area of MW-5D	Evaluation will not be completed until September 2007 to accumulate adequate amount of data for evaluation.	Evaluation will not be completed until September 2007 to accumulate adequate amount of data for evaluation.	Asarco, Murray City
4) Comprehensive and complete evaluation on the status of the remedy was not available at the start of the 5-year review	Responsible parties should provide comprehensive and complete annual reports to the EPA and UDEQ on annual basis (due December 31 each year)	Completion is planned by the end of 9/04.	Comprehensive and complete annual reports were being filed September 2004.	Asarco, Murray City
5) Three additional wells needed to monitor natural attenuation in area occupied by Costco	Install wells	Completion is planned by the end of 9/04.	Construction was complete September 2004.	Asarco, Murray City